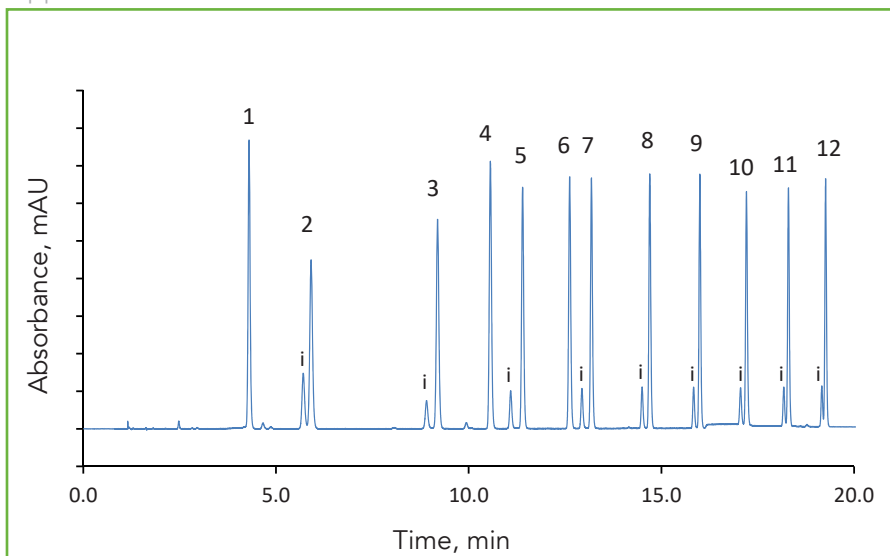




Separation of Carbonyl Compound DNPH Derivatives on HALO® C18, 5 µm

Application Note 156-DNPH



PEAK IDENTITIES:

1. Formaldehyde-2,4-DNPH
 2. Acetaldehyde-2,4-DNPH
 3. Propionaldehyde-2,4-DNPH
 4. Crotonaldehyde-2,4-DNPH
 5. Butyraldehyde-2,4-DNPH
 6. Cyclohexanone-2,4-DNPH
 7. Valeraldehyde-2,4-DNPH
 8. Hexaldehyde-2,4-DNPH
 9. Heptaldehyde-2,4-DNPH
 10. Octylaldehyde-2,4-DNPH
 11. Nonaldehyde-2,4-DNPH
 12. Decaldehyde-2,4-DNPH
- *DNPH = Dinitrophenylhydrazone
i = anti, syn, isomers of the respective DNPH derivatives

A fast, high resolution separation of carbonyl-DNPH derivatives is performed on a HALO® C18, 5 µm column. DNPH, or 2,4-Dinitrophenylhydrazine is used to derivatize these highly volatile and reactive carbonyl compounds. It is important to monitor the levels of these reactive compounds in the environment because they are combustion byproducts found in air, water and soil.

TEST CONDITIONS:

Column: HALO 90 Å C18, 5 µm,
4.6 x 250 mm

Part Number: 95814-902

Mobile Phase:

A: Water

B: 80/20 ACN/THF

Gradient: Hold at 45% B for 5 min
45-95% B from 5-20 min

Flow Rate: 1.5 mL/min

Pressure: 223 bar

Temperature: 30 °C

Detection: UV 360 nm

Injection Volume: 2.0 µL

Sample Solvent: 50/50 ACN/water

Response Time: 0.12 sec

Flow Cell: 5.0 µL semi-micro, bypassed

LC System: Agilent 1100 Series Quaternary

STRUCTURES:

